Remarks/Arguments

The claims have been amended in an effort to overcome the rejection under 35 USC 112, exemplary features being removed from claim 26 and presented as new claims 51 and 52.

The rejection of claims 26-30, 36-42 (now 53-59) and 49 (now 65) under 35 U.S.C. 102(a) as being anticipated by the cited Davi patent is respectfully traversed. Applicants respectfully submit that this patent not only fails to anticipate the method recited in claim 26 or the portable control and/or monitoring unit set forth in claim 53 but that it does not even make it obvious under 35 U.S.C. 103. As the following detailed explanation will show, the patent does not address and deal with the basic concept underlying the claimed invention, i.e. to provide a faultfree connection of a portable electronic control and/or monitoring unit to a machine or machine component **selectable by the users from a plurality of machines or machine components**. While Davi's control unit 40 is separate from machine 10-16, it is always connected to this **one** machine to control the **one** connected components of the machine (rolls 11). There is no concept or even a possibility of the user **selecting** machines or machine components from a plurality of machines or machine components. This concept is utterly alien to Davi.

The Examiner substantially correctly summarized the Davi teaching, which relates to the automatic control of the movements of each roll of a roll bending machine for bending metal sheets. The driver for causing rotation and/or changing the working positions of the rolls is connected to an electronic control device 40 which is fixedly connected to the machine by a cable. The control device comprises a programable process unit with a keyboard enabling an operator to remote-control the rolls selectively.

As shown in Figs. 2 and 3, electronic control device 33 comprises programmable control unit 34 for managing the operation of the machine. This control unit consists of a PLC (programmable logic controller) with its own process unit 35, such as a CPU (central processing unit), a first program memory 36, a second program memory 37, and a third back-up memory 38. An interface (not shown) connects PLC 34 to a set of solenoid valves 32 of the hydraulic power source 31 and to various signal generators or encoders 18, 28, 29 and 30, which control the positions and/or movements of the rolls or movable parts of the bending machine.

Furthermore, electronic control device 33 comprises a digital board 40 which is manually operated for performing a series of functions for programming the machine operation, as

well as display the various functions and working cycle states for the individual roll actuating axes. Board 40, which constitutes a connection interface between the bending machine and the operator, is of the digital type and comprises a first program memory 41 and a second program memory 42 for storing the work programs of the bending machine, which may be transferred from time to time to the PLC so as to be automatically performed. Digital board 40 may be used for checking the operative status of the entire machine in addition to selectively controlling each roll axis.

Board 40 may be removable from console 41 while remaining operatively connected to PCL 34. This may be achieved by a short connecting cable, via radio or in any other suitable manner to form a remote control system which is movable and can be managed in different ways by the operator. Also, board 40 may comprise a display 45.

In the operation of this control system, it must first of all be programmed by means of board 40 so that the various hardware outputs of the PLC are selectively activated by manually operating specific keys of the board.

This system neither provides, nor suggests, a solution to the problem of **selectively** connecting a portable electronic

control and/or monitoring unit to a machine or machine component **selectable** by a user from a plurality of machines or machine components, in as faultfree a manner as possible. While the portable control device of Davi is external to the bending machine, it is always connected thereto and no log-on step is required, as the structure and operation of the Davi system, summarized hereinabove in accordance with the description in the patent, clearly shows. In this connection, it is important to point out that applicants claim no novelty or invention in the **individual electronic structures** used in the claimed method or control unit but in the **combination** of the features recited in claims 26 and 53 to obtain a result not sought or obtainable by the prior art.

Since control device 33 with its board 40 is always fixedly connected to the bending machine, there never arises the problem of connecting it **selectively** to a machine or machine component **selected by the user** from a plurality of machine or machine parts. For this reason, mobile board 40 does **not** have **two** interfaces. Nowhere is there an indication in the Davi patent that the digital board 40 has a first interface for the faultfree set-up of a connection to the **selected** machine or machine component, and a second standard interface for transmitting data to the selected machine or

machine component. This is applicants' contribution to the art.

Referring specifically to claim 26, the Davi patent does not make it obvious to

(1) selectively connect a portable electronic control and/or monitoring unit movable by a user to at least one machine or machine component selectable by the user from a plurality of machines or machine components;

(2) set up a clear link or long-on connection between the control and/or monitoring unit and a point on the selected machine or machine component by means of interfaces for a selected wireless direction-finder of the point or by means of transmitters and/or receivers tuned to the transmission range of reception range, having a limited, localized operating range;

(3) manage via another, standard transmission means a planned control and/or monitoring of the selected machine or machine component, once the connection has been acknowledged and established; and

(4) manage the connection by the user actively accepting/acknowledging the potential connection by means of an operating element on the control and/or monitoring unit.

In other words, while Davi discloses widely known electronic control elements, some of which are also used in applicants' system, not a single step set forth in applicants' entirely different method is suggested by Davi.

As to claim 53, nowhere does Davi suggest a portable electronic control and/or monitoring unit comprising

(1) a second interface for a wireless connection system to a cooperating point in or ony the machine or machine component to be controlled and/or monitored for enabling the user to establish a clear connection or link between the control and/or monitoring unit and the one or more machines or machine components selected by the user from a plurality of machines or machine components to be controlled and/or monitored; and

(2) an operating element on the input device for enabling the user to selectively establish and/or terminate an operative connection via the first interface.

In view of the above independent claims 26 and 53 are respectfully submitted clearly to be patentable over Davi. There is no teaching in the prior art to lead a person of ordinary skill in the art to combine known electronic components in the manner proposed by applicants to arrive at a method and a control unit not contemplated by the prior art.

While the Examiner no longer holds Nishikawa et al to anticipate the claimed invention, she has rejected the claims as unpatentable thereover under 35 U.S.C. 103(a). In this rejection, the Examiner has repeated the previous grounds of rejection verbatim without addressing applicants' detailed analysis of the claimed method and control unit in comparison with the cited patent. Whether or nor it is "well known in the art and is rather a design choice" selectively to connect a portable electronic control unit, the claims recite much more than such a selective connection to distinguish over Nishikawa et al, as the previously submitted analysis clearly shows. They are directed to a **specific** method and control unit, with a **specific** combination of **specific** features. For the record, this the previously submitted analysis is repeated hereinbelow.

(1) Nishikawa, et al nowhere suggests "A method of **selectively** connecting a **portable** electronic control and/or monitoring unit **movable by a user** to at least one machine or machine component **selectable by the user** in a plurality of machines or machine components **for control or monitoring by the user."** According to Nishikawa et al, data signals are wirelessly transmitted from an undefined control station 1 to mobile robots 2-1, 2-2...2-10. These signals can be received by any robot. This arrangement in no way suggests a portable

control unit movable by a user for enabling the user to select a **specific** machine or machine component out of a plurality to control and/or monitor the **selected** machine or machine component.

(2) Nishikawa et al nowhere suggest setting up a clear link or log-on connection between his "control station" and **a point** on the **selected** machine or machine component. According to Nishikawa, et al, a not further defined radio communication is established between the control station and all the robots.

(3) Nishikawa et al nowhere suggests that "once the connection has been acknowledged and established, a **planned** control and/or monitoring of the machine or machine component is managed **via another, standard transmission means**." No such **further** data transmission means is found in Nishikawa et al, which enables the user of the portable control and/or monitoring unit to control and/or monitor the selected machine or machine component.

(4) Finally, Nishikawa et al nowhere suggest that a user manages the potential connection by means of an operating element on the portable control and/or monitoring unit. The "memory of the device," to which the Examiner has referred, has

nothing to do with an operating element handled by the user on the portable control and/or monitoring unit.

Nishikawa et al, submitted by applicants with their originally filed Information Disclosure Statement, merely reflect the general state of the art. The patent deals with a method for controlling the travel of a plurality of mobile robots. In the disclosed method, the control station directs one of a plurality of mobile robots to the destination robot, responding to the direction, searches the route to the destination directed by the control station and sends the result to the control station. The control station which receives the information checks if the travel path searched by mobile robot is already reserved by other mobile robots or not by the reservation table. If not, the control station informs the reserve completion to said mobile robot. The mobile robot which received the information of the reservation completion travels automatically along the travel path which is already reserved. In addition, said control station, when there are other mobile robots which disturb the travel of each mobile robot, directs the robot to wait or to take an alternate route according to the situation, or directs other mobile robots that disturb the travel to halt.

This system prevents a plurality of mobile robots to

collide with each other when they move. However, there is no suggestion in this system of providing an error-free operative connection between two electronic or electro-mechanical units, as provided by applicants. In other words, Nishikawa et al do not provide a system which enables a potential connection between a mobile, electronic control and/or monitoring unit to a machine or machine component. The particular references to specific parts of the Nishikawa et al method are torn by the Examiner from the context of the entire disclosed method, which has nothing to do with that disclosed and claimed by applicants. The core of the claimed subject matter, which is produced by the claimed **combination** of specific parts combined in a specific manner is not suggested by Nishikawa et al.

As the above detailed analysis is believed to show convincingly, the claimed method differs fundamentally and in almost every respect from that of Nishikawa et al.

As to claim 53, similar comments apply thereto. Nishikawa et al nowhere suggest a **portable** control and/or monitoring unit movable by a user, which comprises an operating element for enabling the user to **selectively** establish and/or terminate the connection.

Nishikawa et al discloses a system for avoid the collision

of independently moving robots. Applicants disclose and claim a relatively simple, fault-free system, which in a cost-effective manner assures that an operator can control and/or monitor a machine or machine component selected by the operator. This is provided by the method recited in claim 26 and the device set forth in claim 53. This problem is not addressed by Nishikawa et al, much less solved by them.

In view of the above, claims 26 and 53 are respectfully submitted clearly to be patentable over the cited patents, and the dependent claims are believed to be allowable therewith. Favorable reconsideration and allowance of claims 26-30, 34, and 51-66 are accordingly respectfully solicited.

Respectfully submitted,

DIETER GRAIGER, ET AL

COLLARD & ROE, P.C.
1077 Northern Boulevard
Roslyn, New York 11576
(516) 365-9802
KK:mc/im

Kurt Kelman, Reg.No.18,628
Allison C. Collard, Reg.No.22,532
Edward R. Freedman, Reg.No.26,048
Attorneys for Applicant

I hereby certify that this correspondence is being deposited with the United States Postal Services as first class mail in an envelope addressed Mail Stop Non-Fee Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, Va. 22313-1450 on September 24, 2003.

Maria Guastella

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